

AGENDA

TUSAYAN TOWN COUNCIL MUNICIPAL CODE WORKSHOP

PURSUANT TO A.R.S. § 38-431.02 & §38-431.03

Tuesday, October 1, 2013 at 5:00pm

TUSAYAN TOWN HALL BUILDING

845 Mustang Drive, Tusayan Arizona

Pursuant to A.R.S. § 38-431.02, notice is hereby given to the members of the Tusayan Town Council and to the general public that the Tusayan Town Council will hold a Meeting and Municipal Code workshop open to the public on Tuesday, October 1, 2013 at the Tusayan Town Hall Building. If authorized by a majority vote of the Tusayan Town Council, an executive session may be held immediately after the vote and will not be open to the public. The Council may vote to go into executive session pursuant to A.R.S. § 38-431.03.A.3 for legal advice concerning any matter on the agenda, including those items set forth in the consent and regular agenda sections. The Town Council may change, in its discussion, the order in which any agenda items are discussed during the course of the meeting.

Persons with a disability may request a reasonable accommodation by contacting the Town Manager at (928) 638-9909 as soon as possible.

As a reminder, if you are carrying a cell phone, electronic pager, computer, two-way radio, or other sound device, we ask that you silence it at this time to minimize disruption of today's meeting.

TOWN COUNCIL MUNICIPAL CODE WORKSHOP

1. CALL TO ORDER AND PLEDGE OF ALLEGIANCE

2. ROLL CALL

**MAYOR GREG BRYAN
VICE MAYOR AL MONTOYA**

**COUNCILMEMBER BILL FITZGERALD
COUNCILMEMBER JOHN RUETER
COUNCILMEMBER CRAIG SANDERSON**

** One or two Councilmembers may attend by telephone*

3. DISCUSSION OF DRAFT LANGUAGE FOR THE TUSAYAN MUNICIPAL CODE

Chapter 7 – Building Codes (continued)

4. MOTION TO ADJOURN

CERTIFICATION OF POSTING OF NOTICE

The undersigned hereby certifies that a copy of the foregoing notice was duly posted at the General Store in Tusayan, Arizona on this _____ day of September, 2013, at _____ pm in accordance with the statement filed by the Tusayan Town Council.

Signature of person posting the agenda

**TOWN OF TUSAYAN TOWN COUNCIL
CHAPTER 7 OF THE TOWN OF TUSAYAN TOWN CODE**

**FOR THE ADOPTION OF THE
INTERNATIONAL BUILDING CODE
INTERNATIONAL RESIDENTIAL CODE
INTERNATIONAL MECHANICAL CODE
INTERNATIONAL FUEL GAS CODE
INTERNATIONAL PLUMBING CODE
INTERNATIONAL FIRE CODE
INTERNATIONAL ENERGY CONSERVATION CODE
AND THE NATIONAL ELECTRIC CODE**

**AN ORDINANCE REGULATING THE QUALITY, TYPE OF MATERIAL, AND WORKMANSHIP OF ALL ASPECTS
OF CONSTRUCTION OF BUILDINGS OR STRUCTURES, PROVIDING FOR THE ISSUANCE OF PERMITS AND
COLLECTIONS OF FEES THEREFORE, PROVIDING PENALTIES FOR VIOLATIONS, AND ESTABLISHING A
BUILDING AND SAFETY ADVISORY BOARD.**

SECTION 1 The Town Council hereby adopts, by reference, the following codes: 2006 Editions, published by the International Code Council,

INTERNATIONAL BUILDING CODE including Appendix C, E, F, G, I, J
INTERNATIONAL RESIDENTIAL CODE
INTERNATIONAL MECHANICAL CODE
INTERNATIONAL FUEL GAS CODE
INTERNATIONAL PLUMBING CODE
INTERNATIONAL FIRE CODE
INTERNATIONAL ENERGY CONSERVATION CODE
AND

The 2005 Edition, of the NATIONAL ELECTRIC CODE, published by the National Fire Protection Association

Amendments are listed in Section 8 below. Three copies of the codes are on file with the Town Clerk for the Town of Tusayan.

SECTION 2 These codes shall apply to the incorporated area of the Town of Tusayan.

SECTION 3 This ordinance and the codes referenced herein shall be administered by the Town of Tusayan, Department of Community Development. The administrator shall be the designated Building Official.

SECTION 4 It shall be unlawful to erect, construct, reconstruct, alter, move, demolish, convert, or use any building or structure covered by the Ordinance contrary to, or in violation of, any provisions of these codes. Any person, firm, or corporation violating any of the provisions of these codes is guilty of a class 2 misdemeanor. Each day of continuance of the violation constitutes a separate violation.

SECTION 5 If any section, subsection, sentence, or phrase of this Ordinance is held to be invalid or unconstitutional, such decision shall not affect the validity of the remainder of the Ordinance. The Town Council hereby declares that it would have adopted this Ordinance and each section, subsection, sentence, or phrase irrespective of the fact that any one or more section, subsection, sentence or phrase is declared invalid or unconstitutional.

SECTION 6 There shall be a Building and Safety Advisory Board to determine the suitability of alternative materials and construction, to permit interpretations of the provisions of the code, and to hear appeals and grant waivers to the codes. The Board shall be appointed by the council. The building official shall serve as non-voting ex-officio member and shall act as secretary.

SECTION 7 The Town Council shall, in a separate action, establish fees for building permits and inspections.

SECTION 8 The Town Council hereby adopts the following amendments to the Codes referenced herein:

PART I: 2006 INTERNATIONAL BUILDING CODE AMENDMENTS

IBC 105

Amend IBC 105.1 by adding 105.1.3 to read as follows:

105.1 Manufactured Home Foundation: In **Manufactured Home Subdivisions**, manufactured homes shall be set on permanent foundations built of concrete block or poured concrete, utilizing a footing system according to the Town detail. A manufactured home foundation will require a separate building permit. The permit for a new manufactured home foundation will not be issued until the permit for the manufactured home has been issued. The manufactured home shall be anchored and shimmed to the foundation at four (4) feet on center.

IBC Chapter 2

Amend IBC Chapter 2, Definitions 202 by adding a new section 202.1 to read as follows:

Bedrooms/Sleeping Rooms, Similar Rooms and Common Space: A bedroom/sleeping room is a room or space intended for sleeping purposes, having an escape window, a smoke detector, having a level of privacy such as a door, meeting all Code requirements for habitable space and generally located in a dwelling unit as a point of final destination. Similar rooms include offices, sewing rooms, studies, libraries, exercise rooms and dens that have the potential of the same character and function as a bedroom.

Common space shall be considered a living room, family room, dining room, recreation room, hallway and other spaces that are part of the main exit access to the outside. A room or space shall be considered common space when there is an open finished passage-way of at least four (4) feet wide minimum adjoining the main common area. A second floor loft as a point of final destination shall be considered a bedroom. These rooms or spaces shall be provided with a door or an egress window to the outside and a smoke detector for purposes of escape and life-safety except as approved by the Building Official.

IBC 310

Amend IBC 310.1 by adding a new section 310.1.2 to read as follows:

310.1.2 Efficiency(Studio Apartment) Dwelling Units: An Efficiency (Studio Apartment) Dwelling Unit is any dwelling unit that is sized less than 480 square feet but not smaller than 320 square feet in floor area and shall be located within R-1 and R-2 Occupancies only, apartments, hotels, motels, and condominiums. With the exception of individual rooms in Motels and Hotels, the minimum size for other residential occupancies shall be four hundred eighty (480) square feet in floor area, not including attached garages, decks, or porches. These shall include all R-3 Occupancies: each dwelling unit of a duplex, detached guest house, or a town house. These minimum dwelling units shall meet all applicable code requirements.

IBC 312

Amend IBC 312.1 by adding a new section 312.1.1 to read as follows:

312.1 Floor Surfaces: The floor elevation of the garage or carport slab shall be minimum three and one-half (3 ½) inches lower than the finish floor height of the house. The garage or carport slab shall be sloped 1/8 inch per foot toward the garage door or approach end of the carport.

IBC 402

Amend IRC IBC 402.7.2 by adding a new paragraph to the existing section to read as follows:

402.7.2 Tenant Separations: Tenant separations complying with section 708 shall be required between tenant spaces of commercial, industrial, office, retail, shops and other multi tenant occupancy structures.

IBC 406

Amend IBC 406.1.4 by deleting the reference to one half inch (1/2") adding a new paragraph to the existing section to read as follows:

IBC 406.1.4 Separation: Where reference is made to the use of one half inch (1/2") gypsum board the reference shall be revised to reflect the requirement to use five eighths inch ("5/8) fire resistive gypsum board"

IBC 1008

Amend IBC 1008.1.1. by adding a second paragraph to read as follows:

1008.1.1 Secondary Exits: Exterior doors of single family dwellings other than required exits shall have a width of not less than two (2) feet eight (8) inches. The common door between the interior of the house and the garage shall also be a minimum of two (2) feet eight (8) inches. The minimum required door height of six (6) feet eight (8) inches shall remain the same for all doors for habitable space. Exception: five (5) feet sliding glass and atrium door units.

Amend IBC 1008.1.1 by adding a new section 1008.1.1.2. to read as follows:

1008.1.1.2 Doors in Accessory Structures: All detached accessory structures i.e. garages, storage sheds, and enclosed barns shall have at least one (1) egress door complying with the provisions on section 1008.1.1 minimum hinged, swinging door to the outside which meets the requirements as for a required exit door.

IBC 1505

Amend IBC section 1505 by the deleting the reference to the acceptance to Class C roofing as an acceptable material. The minimum acceptable roofing material shall carry a minimum class B listing; and by the inclusion of exceptions #1 and #2 to read as follows

Exception #1: Metal roofing shall be installed as a Class B roof covering assembly by using approved underlayment sheets that are fire resistive, installed according to the requirements of their listing.

Exception #2: Listed and approved Solar Type shingles for the purposes of generating electric power may be used that have a minimum of a Class C roof covering assembly, installed according to manufacturer's specifications placed over underlayment sheets that are fire resistive.

IBC 1608

Amend IBC 1608.1 by adding a second paragraph to read as follows:

1608.1 Snow Loads: Snow Loads for roof design shall be considered as a non-reducible live load on the roof. The Ground Snow Load shall be a minimum of fifteen (15) pounds per square foot greater than the listed Snow Load.

IBC 1802

Amend IBC 1802.6. by adding 1802.6.1 to read as follows

1802.6.1 Fill Material: Fill material for slab floors in excess of four 12" in depth shall be an engineered fill and verified by a soils report for compaction. Engineered fill and soils reports shall be required for exterior and interior bearing footings and foundations which do not extend into the undisturbed soil. Fill material which is used in slab floor construction shall be limited to 3/8 inch or less dirty cinder, "ABC" (aggregate base course), or native material when approved by the Building Inspector.

IBC 1805

Amend IBC 1805 by adding a new section 1805.3.6 to read as follows:

1805.3.6: Foundation Attachment to Rock Footings may be attached, drilled and pinned, to bed-rock, rock ledges and to large boulder rocks that are unfeasible to remove only when the footing trench has been dug down to no less than eighteen (18) inches into undisturbed soil. The top of a single large boulder rock may encroach a maximum of twelve (12) inches within the top of the footing trench.

The attachment shall be made by drilling into the rock a minimum of eight (8) inches and using a number four (4) rebar pin driven into the hole securely or use epoxy adhesive, with an extension of the rebar a minimum of fifteen (15) inches long to make a lap with the footing or stem wall rebar. The pin spacing shall be no less than four (4) feet on center and twelve (12) inches on center when stepping over boulders.

Drilling and pinning of footings to rock located less than eighteen (18) inches into undisturbed soil, the attachment of the pins shall be designed and the plan stamped by an Arizona registered engineer.

IBC 1805

Amend IBC section 1805 by adding a new section 1805.3.7 to read as follows:

1805.3.7 Manufactured Home and Factory Build Buildings: Each site where a manufactured home or Factory Build Building is to be placed shall be sufficiently scraped and graded to remove all vegetation and organic material down to where the grade is considered the top of undisturbed soil. This shall be done before any fill is placed or footing blocks installed on grade.

A maximum of twelve (12) inches of fill of "ABC" or cinder floor fill adequately compacted is allowed to be placed under the manufactured home or Factory Build Building for the installation of the footing blocks.

Fills in excess of twelve (12) inches for the bearing of the manufactured home or Factory Build Building on grade shall be designed by an engineer as engineered fill.

When the footings are to be installed as poured concrete continuous footings (runners), the footings shall be sized sixteen (16) inches wide and eight (8) inches thick with two (2) continuous number four (4) rebar. These footings shall be placed in a trench dug down eight (8) inches into undisturbed soil minimum.

Manufactured homes or Factory Build Building shall be anchored with approved three (3) feet in length heavy duty auger anchors or equivalent with straps placed four (4) feet from each end maximum and evenly spaced a maximum of twelve (12) feet on center or according to manufacturer's specifications whichever is more restrictive. When approval is given and a manufactured home is installed in a flood plain the manufactured home or Factory Build Building shall be placed on a code complying foundation system and anchored. When the required elevation height of the manufactured home or Factory Build Building is within the limitation for set-up, according to Arizona State Office of Manufactured Housing and is grade-set the home shall be anchored with approved four (4) feet in length heavy duty auger anchors with straps placed four (4) feet from each end and evenly spaced a maximum of ten (10) feet on center.

IBC Table 2304

Amend IBC 2304.7. by adding a new section IBC 2304.7.1.1 to read as follows:

IBC 2304.7.1.1 Wood Decking: Wood decking on exterior decks shall have a maximum spacing of 1/4 inch after shrinkage.

IBC Table 2304

Amend IBC Table 2304.7(3) by eliminating the reference "Without edge support", in the "Maximum Span" column, for all materials less than 15/32 in thickness

IBC Table 2304

Amend IBC Table 2304.9.1 No. 24. Add the following as an additional description in the table:

IBC Table 2304.9.1 #24 Built Up Girders: 2"x_____ " built-up girders, four (4) or more shall be joined together by one-half (1/2) inch through bolts, thirty-two (32) inch o.c. staggered.

IBC 2304

Amend IBC 2304.11.5 by adding an additional exception:

IBC 2304.11.5 Exception #2: Glue-laminated structural beams exposed to weather used to support decks, porches, and porch roofs may be of non-pressure treated wood provided the glue-laminated structural beam is primed and sealed (2 coats minimum) and that protection is maintained. These glue-laminated structural beams shall be manufactured with exterior glue.

IBC 2308

Amend IBC section 2308.9.1 by the addition of a new section 2309.1.1 to read as follows:

IBC 2308.9.1.1 Wall Framing Details: All framing corners shall be accessible to allow complete insulation. At exterior corners the third required stud shall be placed parallel with the interior wall covering backing so as to allow full insulation between the stud space of sixteen (16) inches or twenty four (24) inches. The parallel stud shall make full contact with the stud of the perpendicular wall for structural nailing.

At the intersection of an exterior wall and an interior partition the normal stud spacing shall be maintained for the exterior wall with blocking installed (ladder blocking) at sixteen (16) inches on center for the attachment of the intersecting interior wall and as the required backing for interior wall covering.

Part II: 2006 INTERNATIONAL RESIDENTIAL CODE REVISIONS
IRC 105

Amend IRC section 105.1 by adding a new section 105.1.2. to read as follows:

R105.1 Park Model and Travel Trailer Recreational Vehicles(RV): Whenever a Park Model, travel trailer, or recreational vehicle is installed as a dwelling unit as part of a permanent home-site when approved by Conditional Use or when installed in a Recreational Vehicle Park and having substantial improvements such as additions or when installed in a floodplain, an Installation Permit shall be required.

Additions to the Park Model, travel trailer, or recreational vehicle shall also require a Building Permit.

EXCEPTION: A platform with a maximum size of eight (8) feet by twenty (20) feet at a maximum height of twelve (12) inches above grade, located adjacent to a Park Model or travel trailer RV shall not require a permit.

IRC R115

Amend IRC Chapter 1 by adding a new section R115 including subsections R115.1, R115.2 and R115.3 to read as follows (Reference Chapter 5 in the 2006 International Fire Code):

IRC R115: For new land divisions resulting in one or more buildable parcels of land and where the access easement or right-of-way exceeds one-hundred fifty (150) feet in length from the nearest Public Street, or accepted Private Road or Street, an all-weather road at least twenty (20) feet in unobstructed width and providing a minimum vertical clearance of 13'6" must be constructed to provide access to the one or more new parcels. The road must be constructed prior to initiation of construction or installation of any buildings or other structures, or the introduction of any combustible materials, to the property.

For parcels where the topography or physical obstruction prevents road standards from being met and prevents access by fire equipment all structures shall be provided with an automatic Fire sprinkler system.

IRC R115.1: An all-weather road is defined as a road capable of carrying a minimum forty-two thousand (42,000) pound vehicle, or greater, as required by the Tusayan Fire Department.

IRC R115.2: Bridges on private easements or on driveways exceeding one-hundred fifty (150) feet in length must be engineered to carry a forty-two thousand (42,000) pound load. Bridges on Public rights-of-ways or accepted private streets or roads shall be constructed and maintained in accordance with AASHTO HB-17

IRC Chapter 2

Amend IBC and IRC Chapter 2, Definitions R202 by adding a new section R202.1 to read as follows:

Bedrooms/Sleeping Rooms, Similar Rooms and Common Space: A bedroom/sleeping room is a room or space intended for sleeping purposes, having an escape window, a smoke detector, having a level of privacy such as a door, meeting all Code requirements for habitable space and generally located in a dwelling unit as a point of final destination. Similar rooms include offices, sewing rooms, studies, libraries, exercise rooms and dens that have the potential of the same character and function as a bedroom.

Common space shall be considered a living room, family room, dining room, recreation room, hallway and other spaces that are part of the main exit access to the outside. A room or space shall be considered common space when there is an open finished passage-way of at least four (4) feet wide minimum adjoining the main common area. A second floor loft as a point of final destination shall be considered a bedroom. These rooms or spaces shall be provided with a door or an egress window to the outside and a smoke detector for purposes of escape and life-safety except as approved by the Building Official.

IRC Chapter 2

Amend IRC Chapter 2, Definitions R202 by adding a new section R202.2 to read as follows:

Engineered Fill: Engineered fill: Materials specified as to their composition, placement, compaction and frequency of soils tests, by a Registered Arizona professional engineer. Soils reports specified by the engineer are to be made available to the administrative authority as a permanent record with the building permit.

IRC Table R301

Amend IRC Table R301.2 (1) to include the follows criteria:

Climatic and Geographical Design Criteria

Snow Load – 40

Ground Snow Load – 15

Wind Speed – 105 Miles per Hour

Seismic Design Category – Do

Weathering – Moderate

Frost Line –30"

Termite – yes

Ice Barrier Underlayment Required - Yes

Flood Hazard – The Flood Plain Administrator is the Director of Coconino County Community Development.

IRC Table R301

Amend IRC Table R301.5 to read as follows:

Minimum Uniformly Distributed Live Loads

Decks: Change the 40 pound per square foot load to 60 pounds per square foot.

Sleeping Rooms: Change the 30 pound per square load to 40 pounds per square foot.

Storage Rooms: Add a new use category and apply 60 pounds per square foot

IRC R303

Amend IRC R303.8 by the addition of an additional paragraph to read as follows:

Required Heating: In single family dwellings where solar and/or wood are the primary sources of heat, the dwelling shall have a conventional heating system. Pre-wiring fixed electric space heating is acceptable as a minimum, or vented gas space heating permanently installed. In single family dwellings that are off of the electric utility power grid, vented gas space heating permanently installed is required or the water distribution plumbing system shall be installed as a self drain down system.

IRC R305

Amend IRC R305.1, including the exceptions, to read as follows:

R305.1 Minimum Heights: Change the reference to the minimum ceiling height of 7 feet to 7 feet 6 inches.

Exception 3: Change the reference to the minimum ceiling height of seven feet (7') feet to seven feet six inches (7' feet 6").

Add an exception 5: Porch ceilings and their primary exit path, garages and accessory structures, shall have a minimum ceiling height of; 7 feet – 0 inches (finished floor to bottom of finished ceiling, beam, pipe or duct).

IRC R309

Amend IRC section R309.2 by modifying the reference to one half inch (1/2") gypsum as follows:

R309.2 Separation Required: Where reference is made to the use of one half inch (1/2") gypsum board the reference shall be revised to reflect the requirement to use five eighths inch ("5/8) fire resistive gypsum board".

R309.2: Further amend IRC section R309.2 by deleting the last sentence in the section.

Amend IRC R309.2 by adding a new paragraph to section to read as follows:

R309.2.1: All attached garages shall have five eighths (5/8") inch fire resistive drywall and materials rated for one (1) hour fire resistive construction on all walls and the ceiling to provide a complete separation. Extending the fire resistive drywall on the common wall taken to the roof sheathing is not acceptable alternative. Openings that are located in walls under protruding construction of the building with useable space above or an exterior exit balcony the underside of the construction of the area above shall be of one (1) hour fire resistive construction.

Amend IRC R309.2 by the addition of a new subsection R309.2.2 to read as follows:

R309.2.2: Attic Accesses covers through a fire restrictive ceiling of an attached garage shall be constructed of three quarter inch (¾ ") inch plywood and five eighths inch (5/8") fire resistive gypsum board attached to the plywood using glue and screws. The screws shall a minimum one inch (1") and be spaced a minimum six inches (6") on center in all directions. The supports for the cover shall be supported by a 5/8 inch Type X drywall edge. A pull down ladder access shall have a twenty (20) minute fire rating or shall have its assembly approved by the Building Official.

IRC R309

Amend IRC R309.3 by adding a second paragraph to read as follows:

R309.3 Floor Surfaces: The floor elevation of the garage or carport slab shall be minimum three and one-half (3 ½) inches lower than the finish floor height of the house. The garage or carport slab shall be sloped 1/8 inch per foot toward the garage door or approach end of the carport.

IRC R311

Amend IRC R311.4.1 by adding a new section R311.4.1.2 to read as follows:

R311.4.1.2 Emergency Escape from Basements: Any floor at grade level shall have a 3068 (3' x 6'8") minimum exit door providing direct access to the exterior of the structure.

IRC R313

Amend IRC R313.2 by adding a new item 4 to read as follows:

R313.2 #4. Smoke detectors shall be required in garages, storage areas, or workshops and shall be audible simultaneously with smoke detectors throughout the dwelling unit. If a dwelling has a vaulted ceiling, a smoke detector shall be installed between twelve (12) inches and eighteen (18) inches below the ridge beam or the peak and shall be audible simultaneously with smoke detectors throughout the dwelling unit. Smoke detectors installed on walls or ceilings shall be kept a minimum of twelve (12) inches away from the corner. (Manufacturers specifications recognize a dead air space within twelve (12) inches of the corner.)

IRC R319

Amend IRC R319.1.5 by editing the paragraph to read as follows:

IRC R319.1.5: Exposed Glued Laminated Timbers: The portions of Glued Laminated Timbers that form the structural supports of a building or other structure and are exposed to the weather shall be shall be pressure treated with preservative, or be manufactured from naturally durable or preservative-treated Wood.

IRC R403

Amend IRC section R403 by adding a new section R403.1.9 to read as follows:

R403.1.9: Footings may be attached, drilled and pinned, to bed-rock, rock ledges and to large boulder rocks that are unfeasible to remove only when the footing trench has been dug down to no less than eighteen (18) inches into undisturbed soil. The top of a single large boulder rock may encroach a maximum of twelve (12) inches within the top of the footing trench

The attachment shall be made by drilling into the rock a minimum of eight (8) inches and using a number four (4) rebar pin driven into the hole securely or use epoxy adhesive, with an extension of the rebar a minimum of fifteen (15) inches long to make a lap with the footing or stem wall rebar. The pin spacing shall be no less than four (4) feet on center and twelve (12) inches on center when stepping over boulders.

Drilling and pinning of footings to rock located less than eighteen (18) inches into undisturbed soil, the attachment of the pins shall be designed and the plan stamped by an Arizona registered engineer.

IRC R403

Amend IRC section R403 by adding a new section R403.1.10 to read as follows:

R403.1.10 Manufactured Home: Each site where a manufactured home is to be placed shall be sufficiently scraped and graded to remove all vegetation and organic material down to where the grade is considered the top of undisturbed soil. This shall be done before any fill is placed or footing blocks installed on grade.

A maximum of twelve (12) inches of fill of "ABC" or cinder floor fill adequately compacted is allowed to be placed under the manufactured home for the installation of the footing blocks.

Fills in excess of twelve (12) inches for the bearing of the manufactured home on grade shall be designed by an engineer as engineered fill.

When the footings are to be installed as poured concrete continuous footings (runners), the footings shall be sized sixteen (16) inches wide and eight (8) inches thick with two (2) continuous number four (4) rebar. These footings shall be placed in a trench dug down eight (8) inches into undisturbed soil minimum.

Manufactured homes shall be anchored with approved three (3) feet in length heavy duty auger anchors or equivalent with straps placed four (4) feet from each end maximum and evenly spaced a maximum of twelve (12) feet on center or according to manufacturer's specifications whichever is more restrictive. When approval is given and a manufactured home is installed in a flood plain the manufactured home shall be placed on a code complying foundation system and anchored. When the required elevation height of the manufactured home is within the limitation for set-up, according to Arizona State Office of Manufactured Housing and is grade-set the home shall be anchored with approved four (4) feet in length heavy duty auger anchors with straps placed four (4) feet from each end and evenly spaced a maximum of ten (10) feet on center.

IRC Table R503

Amend IRC Table R503.2.1(1) by eliminating the reference "Without edge support" in the "Maximum Span" column for all materials less than 15/32 in thickness.

IRC R503

Amend R503.1 by adding a new section IRC R503.1.0.1 to read as follows:

IRC R503.1.1.1 Wood Decking: Wood decking on exterior decks shall have a maximum spacing of 1/4 inch after shrinkage.

IRC R602

Amend IRC section R602.3.1 by the addition of a new section 602.3.1.1 to read as follows:

IRC R602.3.1.1 Wall Framing Details: All framing corners shall be accessible to allow complete insulation. At exterior corners the third required stud shall be placed parallel with the interior wall covering backing so as to allow full insulation between the stud space of sixteen (16) inches or twenty four (24) inches. The parallel stud shall make full contact with the stud of the perpendicular wall for structural nailing.

At the intersection of an exterior wall and an interior partition the normal stud spacing shall be maintained for the exterior wall with blocking installed (ladder blocking) at sixteen (16) inches on center for the attachment of the intersecting interior wall and as the required backing for interior wall covering.

IRC R902

Amend IRC section R902 by the deleting the reference to the acceptance to Class C roofing as an acceptable material. The minimum acceptable roofing material shall carry a minimum class B listing; and by the inclusion of exceptions #1 and #2 to read as follows:

Exception #1: Metal roofing shall be installed as a Class B roof covering assembly by using approved underlayment sheets that are fire resistive, installed according to the requirements of their listing.

Exception #2: Listed and approved Solar Type shingles for the purposes of generating electric power may be used that have a minimum of a Class C roof covering assembly, installed according to manufacturer's specifications placed over underlayment sheets that are fire resistive.

IRC G2406

Amend IRC G2406.2 by modifying provision #2, by deleting provisions #3, and #4 and buy modifying provision #5 to read as follows:

G2406.2 Provision #2: Vented room heaters, wall furnaces, vented decorative appliances, vented gas fireplaces, vented gas fireplace heaters, and decorative appliances for installation in vented solid fuel-burning fireplaces receiving all combustion air direct from the outside shall be permitted.

G2406.2 Provision #5: the door between the room and the appliance shall be a minimum inch and three eighths (13/8") fully weather stripped solid core door. Furnace located in an attic or crawl space may be accessed through a closet.

IRC G2406

Amend IRC G2406.2 by adding to IRC G2406.2, # 6 as follows:

G2406.2 Provision #6: Equipment burning Liquid Petroleum Gas shall not be located in a pit, an under floor space, below grade or similar locations where vapors or fuel might unsafely collect unless an approved method for the safe collection, removal and containment or disposal of the vapors or fuel is provided.

At grade crawl spaces, garages and non-habitable spaces in under floor locations, and daylight basements shall be spaces where methods for safe collection, removal and containment or disposal of the vapors or fuel may be provided. Pits and below grade basements are spaces that LPG appliances are strictly prohibited.

Combustion air for an LPG appliance shall not be drawn from a location where LP gas is likely to drain or settle. 3. COMBUSTION AIR DRAWN FROM OUTDOORS – Amend IFGC 304.1 and IRC G2407.1 by adding IFGC 304.1.0.1 and IRC G2407.1.0.1 to read as follows:

New construction and existing buildings that have been remodeled and durably sealed against air infiltration as regulated under the International Energy Conservation Code shall be considered Unusually Tight Construction. All fuel burning appliances shall have the required combustion air drawn from the outdoors.

All Appliances within habitable portions of a building shall be installed in a sealed compartment with outside combustion air or be of the Direct-Vent type.

Exceptions to this requirement shall include: gas clothes dryer, gas cooking range and oven,

IRC G2413.2

Amend section IRC Section G2413.2 to include Table 3804.3 from the 2006 International Fire Code for the location of Liquefied Petroleum Storage Tanks and renumber as Table G2413.1

Table G2413.1

Liquefied Petroleum Gas Storage

Container Capacity	MINIMUM SEPARATION BETWEEN CONTAINERS AND BUILDINGS, PUBLIC WAYS OR LOT LINES OF ADJACENT PROPERTY THAT CAN BE BUILT UPON		Minimum Separation Between containers
	Mounded or Underground Containers "a"	Above Ground Containers "b"	
Less than 125	10	5	None
125- 250	10	10	None
251-500	10	10	3
501-2,000	10	25	3

IRC G2415

Amend IRC G2415.7 by adding IRC G2415.7.1 to read as follows:

IRC G2415.7.1 Approved connection to LP Tanks: The connection of the building gas yard line to the regulator at the LPG tank shall be a rigid pipe or an approved, listed and labeled exterior flex connector (Manufactured Home Flex Connector) sized for the full demand of fuel to be served.

Because the copper tubing that is generally used as the connection from the tank to the regulator is a material that can be damaged when exposed above ground outdoors. The copper tubing shall be installed as short as practical, to compensate for expansion, contraction, jarring, vibrations and settlement (by the use of bends, loops or offsets) as required by NFPA 58 section 3-2.10.6, and protected from physical damage by being installed under the protective dome of the LPG tank.

IRC G2415

Amend IRC Section G2415.9 by revising the section in its entirety changing the burial depth as follows:

G2415.9 Minimum Burial Depth: for Black Iron piping that is approved for underground installation the minimum cover over the top of the pipe shall be twelve (12) inches. For approved Plastic Pipe, the minimum cover over the top of the pipe shall be eighteen (18) inches.

IRC G2422

Amend IRC G2422.1. by deleting the item # 1 of following paragraph

IRC G2445

Amend IRC G2445.2 by deletion of text and rewrite to read as follows:

G2445.2 Unvented: decorative appliances, fireplaces, and room heaters are prohibited for use within the residential structures

IRC M1411

Amend IMC section IRC M1411.3 by adding a second paragraph to read as the follows:

M1411.3 When condensate: water is approved to drain on the ground outside of buildings the condensate shall drain on to a concrete gutter stone 3 feet long minimum so as not to collect water against the foundation. The discharge of the condensate from the gutter stone shall drain out into the yard and away from the building.

IRC P3103.

Amend IRC section P3103.1 by inserting (12") into the second line of the first paragraph in the space provided in the text

IRC P3103

Revise section P3103.2 by deleting the text to read as follows:

P3103.1 Every vent extension through a roof or wall shall be a minimum of three (3) inches in diameter. Any increase in the size of the vent shall be made inside the structure a minimum of one (1) foot below the roof or inside the wall

IRC E3301

Amend section E3301 by adding a new section E3301.5 to read as follows:

E3301.5: Use of aluminum wire where specified throughout this code shall be approved for **Service Entrance Conductors** and/or **Panel Feeders Conductors Only**, and shall not be used for any other purpose.

IRC E3501

Amend IRC section E3501 by adding section 3501.8 to read as follows:

E3501.8 Temporary power will be permitted for construction under an issued building permit for new construction. These services shall supply one (1) or more fifteen (15) or twenty (20) amperes one hundred twenty (120) volt duplex receptacles that are G.F.C.I. protected for construction purposes.

IRC E3505

Amend section E3505.4 by adding section E3505.4.1 to read as follows:

E3505.4.1: All multi-tenant occupancy structures, the sub-panel feeders shall not be routed through an adjacent occupancy or building. If installed below-grade the raceways may be either Schedule 80 Rigid Nonmetallic Conduit (RNC) or Rigid Metallic Conduit (RMC). Above-grade raceways shall be Rigid Metallic Conduit (RMC) and shall extend to a point a minimum of four (4) inches below grade before transitioning to another material. An underground Schedule 80 Rigid Nonmetallic Conduit (RNC) may extend up to panel height if within its own occupancy.

IRC E3801

Amend Section E3801 by adding a new section E3801.9.1 to read as follows:

IRC E3801.9.1: All receptacle outlets in garages, and basements shall be installed a minimum of eighteen (18) inches above the highest adjacent finish floor.

IRC E4109

Amend section E4109.1 by adding a second paragraph to read as follows:

E4109.1 second paragraph: The ground fault circuit interrupter device shall be motor rated (faceless G.F.C.I.) and readily accessible. (See N.E.C. definition for accessible and readily accessible)

IRC N1102

Amend IRC N1102.1 including Table 1102.1 by adding IRC N1102.1, 1, 2, 3

Table 1102.1

Insulation and Fenestration Requirements by Component

Climat e Zone	Fenestratio n u-Factor (1)	Skylight U- Factor	Glazed Fenestratio n SGGC	Ceiling R-Value	Wood Frame d Wall R- Value	Mass Wall R- value (a) (b) (c)	Basemen t Wall R- Value	Slab Value & Depth (2)	R- & Crawl Space Wall R- Value
5	.45 low E	.74	n/a	38	15 (2X4 Walls	13 (3)	10/13	R5 for 4 feet	10/13

1. When metal or aluminum windows are used they shall be Low E with a thermal break. EXCEPTION – Windows for approved passive solar design.
2. When the slab and foundation insulation is applied to the inside of the construction an additional R-5 one (1) inch of rigid insulation shall be installed vertically between the top course of the stem wall and the edge of the slab as a thermal break.
3. There shall be alignment with the thermal barrier insulation and the air barrier in all cases.
 - a) Insulation shall be installed in full contact with the air barrier on both sides of exterior walls. The insulation shall be installed so as not to create any voids around piping, wiring, blocking and any other obstruction within the wall cavity.
 - b) Insulation shall be installed in full contact with the conditioned side of the air barrier of flooring above and in attics the ceiling covering below. The insulation shall be installed so as not to create any voids around piping, wiring, blocking and any other obstruction within the floor or ceiling cavity.
 - c) When faced insulation is used the tabs of the insulation facing shall be lapped over the framing members.

IRC N1102

Amend IRC N1102.4.1 by adding a second paragraph preceding the itemized provisions; by adding new provisions #11 and #12; and by adding an additional paragraph following the itemized provisions to read as follows:

N1102.4.1 second paragraph: All frame construction shall have an approved permeable Grade D minimum building wrap or building paper installed over the panel sheathing or on the exterior stud surface when panel siding is used. This application is recognized to avoid condensation on building materials and the installation of a vapor retarder on the warm-in-winter side of the wall assembly will **not** be required as stated in IECC 402.5 and IRC N1102.5.

11. Window and door openings shall be flashed by approved methods and materials.
12. Approved sill seal gasket material shall be installed under the bottom sill plate for slab on grade construction.

N1102.4.1 last paragraph: Based on the requirements for construction to be durably sealed to limit air infiltration, all new construction, and existing construction, that has been remodeled to meet the requirements of this section, shall be considered **UNUSALLY TIGHT CONSTRUCTION**.

IRC N1103

Amend N1103.2 by adding a new section N1103.2.4 to read as follows:

N1103.2.4: All rooms in a building that have a ventilation heat supply shall have a return air duct system from each room, that will provide a path for return air back to the main return air to keep all areas of the building at equal pressure. EXCEPTION – Bathrooms, Toilet Rooms, Laundry Rooms and other similar spaces need not be included in the system design.

Ducts and plenums shall be sealed with approved mastic at joints to provide for an air tight system. Furnace equipment may be sealed with metallic duct tape.

IRC N1103

Amend IRC N1103.2 by the addition of an additional paragraph; and by the addition of an additional exception to read as follows:

N1103.2.1 second paragraph: A minimum R-8 duct insulation shall be installed on all duct work located in unconditioned spaces.

N1103.2.1 Exception #2 In existing construction where the floor and attic trusses and associated clearances make it impractical to install R-8 insulation on the main trunk of the system R-6 duct may be used.

PART III: 2006 INTERNATIONAL FUEL GAS CODE REVISIONS

IFGC 303

Amend IFGC 303.3 by modifying provision #2, by deleting provisions #3, and #4 and buy modifying provision #5 to read as follows.

303.3 Provision #2: Vented room heaters, wall furnaces, vented decorative appliances, vented gas fireplaces, vented gas fireplace heaters, and decorative appliances for installation in vented solid fuel-burning fireplaces receiving all combustion air direct from the outside shall be permitted

303.3 Provision #5: the door between the room and the appliance shall be a minimum inch and three eights (13/8) fully weather stripped solid core door.

Furnace located in an attic or crawl space may be accessed through a closet.

IFGC 303

Amend IFGC 303.3 by adding to IFGC 303.3 Number 6 as follows:

303.3 Provision #6 Equipment burning Liquid Petroleum Gas shall not be located in a pit, an under floor space, below grade or similar locations where vapors or fuel might unsafely collect unless an approved method for the safe collection, removal and containment or disposal of the vapors or fuel is provided.

At grade crawl spaces, garages and non-habitable spaces in under floor locations, and daylight basements shall be spaces where methods for safe collection, removal and containment or disposal of the vapors or fuel may be provided. Pits and below grade basements are spaces that LPG appliances are strictly prohibited.

Combustion air for an LPG appliance shall not be drawn from a location where LP gas is likely to drain or settle. 3. COMBUSTION AIR DRAWN FROM OUTDOORS – Amend IFGC 304.1 and IRC G2407.1 by adding IFGC 304.1.0.1 and IRC G2407.1.0.1 to read as follows:

New construction and existing buildings that have been remodeled and durably sealed against air infiltration as regulated under the International Energy Conservation Code shall be considered Unusually Tight Construction. All fuel burning appliances shall have the required combustion air drawn from the outdoors.

All Appliances within habitable portions of a building shall be installed in a sealed compartment with outside combustion air or be of the Direct-Vent type.

Exceptions to this requirement shall include: gas clothes dryer, gas cooking range and oven,

IFGC 401

Liquefied Petroleum Gas Storage – Amend section 401.2 to include Table 3804.3 from the 2006 International Fire Code for the location of Liquefied Petroleum Storage Tanks and renumber as Table 401.2

Table 402.1

Container Capacity	MINIMUM SEPARATION BETWEEN CONTAINERS AND BUILDINGS, PUBLIC WAYS OR LOT LINES OF ADJACENT PROPERTY THAT CAN BE BUILT UPON		Minimum Separation Between containers
	Mounded or Underground Containers "a"	Above Ground Containers "b"	
Less than 125	10	5	None
125- 250	10	10	None
251-500	10	10	3
501-2,000	10	25	3

IFGC 404

Amend IFGC 404.7 by adding 404.7.1 to read as follows:

IFGC 404.7.1 Approved connection to LP Tanks: The connection of the building gas yard line to the regulator at the LPG tank shall be a rigid pipe or an approved, listed and labeled exterior flex connector (Manufactured Home Flex Connector) sized for the full demand of fuel to be served.

Because the copper tubing that is generally used as the connection from the tank to the regulator is a material that can be damaged when exposed above ground outdoors. The copper tubing shall be installed as short as practical, to compensate for expansion, contraction, jarring, vibrations and settlement (by the use of bends, loops or offsets) as required by NFPA 58 section 3-2.10.6, and protected from physical damage by being installed under the protective dome of the LPG tank.

IFGC 404

Amend IFGC Section 404.9 by revising the section in its entirety changing the burial depth as follows:

404.9 Minimum Burial Depth: for Black Iron piping that is approved for underground installation the minimum cover over the top of the pipe shall be twelve (12) inches. For approved Plastic Pipe, the minimum cover over the top of the pipe shall be eighteen (18) inches.

IFGC 621

Amend IFGC 621.2 by deletion of text and rewrite to read as follows:

621.2 Unvented: decorative appliances, fireplaces, and room heaters are prohibited for use in residential structures.

IFGC 411

Amend IFGC 411.1.1 by deleting the item # 1

Part IV: 2006 International Mechanical Code Amendments

IMC 307

Amend IMC section 307.2.1 by adding a second paragraph to read as the follows:

307.2.1 When condensate: water is approved to drain on the ground outside of buildings the condensate shall drain on to a concrete gutter stone 3 feet long minimum so as not to collect water against the foundation. The discharge of the condensate from the gutter stone shall drain out into the yard and away from the building.

PART V: 2006 International Plumbing code Amendments

IPC 904

Amend IPC section 904.1, by inserting (12") into the second line of the first paragraph in the space provided in the text

IPC 904

Revise section 904.2 by deleting the text to read as follows:

904.2 Every vent extension through a roof or wall shall be a minimum of three (3) inches in diameter. Any increase in the size of the vent shall be made inside the structure a minimum of one (1) foot below the roof or inside the wall ng permit for new construction. These services shall supply one (1) or more fifteen (15) or twenty (20) amperes one hundred twenty (120) volt duplex receptacles that are G.F.C.I. protected for construction purposes.

NEC 230

Amend Article 230.3 by adding article 230.3 (A) to read as follows:

230.3 (A) All multi-tenant occupancy structures, residential or commercial, the sub-panel feeders shall not be routed through an adjacent occupancy or building. If installed below-grade the raceways may be either Schedule 80 Rigid Nonmetallic Conduit (RNC) or Rigid Metallic Conduit (RMC) . Above-grade raceways shall be Rigid Metallic Conduit (RMC) and shall extend to a point a minimum of four (4) inches below grade before transitioning to another material. An underground Schedule 80 Rigid Nonmetallic Conduit (RNC) may extend up to panel height if within its own occupancy.

NEC 310

Amend Article 310.2(B) by adding article 310.2 (B) (1) to read as follows:

310.2 (B) (1): Use of aluminum wire where specified throughout this code shall be approved for **Service Entrance Conductors** and/or **Panel Feeders Conductors Only**, and shall not be used for any other purpose.

NEC 210

Amend Article 210 by adding Article 210.64 to read as follows:

NEC 210.64: All receptacle outlets in garages, residential, commercial or industrial shall be installed a minimum of eighteen (18) inches above the highest adjacent finish floor.

NEC 334

Amend Article 334-10 by deleting conditions #3 and #4 and adding an additional paragraph to read as follows:

334.10 - second paragraph: The cable assemblies regulated in Article 334 shall be limited to the identified conditions throughout the article but limited to; for one and two family dwellings and Multi family structures permitted to be constructed of type VB construction as identified in the IBC.

NEC 358

Amend Article 358.12 by deleting conditions (3) and (4) adding a condition (7) to read as follows:

NEC 358.12 (7) Electrical metallic tubing (E.M.T.) shall not be allowed for underground raceways.

NEC 680

Amend Article 680-71 by adding 680-71(1) to read as follows:

680-71 (1) The ground fault circuit interrupter device shall be motor rated (faceless G.F.C.I.) and readily accessible. (See N.E.C. definition for accessible and readily accessible)

PART VII: 2006 INTERNATIONAL ENERGY CONSERVATION CODE AMENDMENTS**IECC 402**

Amend IECC 402.1.1 including Table 402.1.1 by adding IECC 402.1.1.A.B.C.D.E

Table 402.1.1

Insulation and Fenestration Requirements by Component

Climat e Zone	Fenestratio n u-Factor (1)	Skylight U- Factor	Glazed Fenestratio n SGGC	Ceiling R-Value	Wood Frame d Wall R- Value	Mass Wall R- value (a) (b) (c)	Basemen t Wall R- Value	Slab Value & Depth (2)	R- & Crawl Space Wall R- Value
5	.45 low E	.74	n/a	38	15 (2X4 Walls	13 (3)	10/13	R5 for 4 feet	10/13

1. When metal or aluminum windows are used they shall be Low E with a thermal break. EXCEPTION – Windows for approved passive solar design.
2. When the slab and foundation insulation is applied to the inside of the construction an additional R-5 one (1) inch of rigid insulation shall be installed vertically between the top course of the stem wall and the edge of the slab as a thermal break.
3. There shall be alignment with the thermal barrier insulation and the air barrier in all cases.
 - a) Insulation shall be installed in full contact with the air barrier on both sides of exterior walls. The insulation shall be installed so as not to create any voids around piping, wiring, blocking and any other obstruction within the wall cavity.

- b) Insulation shall be installed in full contact with the conditioned side of the air barrier of flooring above and in attics the ceiling covering below. The insulation shall be installed so as not to create any voids around piping, wiring, blocking and any other obstruction within the floor or ceiling cavity.
- c) When faced insulation is used the tabs of the insulation facing shall be lapped over the framing members.

IECC 404

Amend IECC 402.4.1 by adding a second paragraph Additional paragraph preceding the itemized provisions; by adding new provisions #11 and #12; and by adding an additional paragraph following the itemized provisions to read as follows:

402.4.1 second paragraph: All frame construction shall have an approved permeable Grade D minimum building wrap or building paper installed over the panel sheathing or on the exterior stud surface when panel siding is used. This application is recognized to avoid condensation on building materials and the installation of a vapor retarder on the warm-in-winter side of the wall assembly will **not** be required as stated in IECC 402.5 and IRC N1102.5.

11. Window and door openings shall be flashed by approved methods and materials.

12. Approved sill seal gasket material shall be installed under the bottom sill plate for slab on grade construction.

402.4.1 Last paragraph: Based on the requirements for construction to be durably sealed to limit air infiltration, all new construction, and existing construction, that has been remodeled to meet the requirements of this section, shall be considered **UNUSALLY TIGHT CONSTRUCTION**.

IECC 403

Amend IECC 403.2 by adding a new section IECC 403.2.4 to read as follows:

403.2.4: All rooms in a building that have a ventilation heat supply shall have a return air duct system from each room, that will provide a path for return air back to the main return air to keep all areas of the building at equal pressure. **EXCEPTION** – Bathrooms, Toilet Rooms, Laundry Rooms and other similar spaces need not be included in the system design.

Ducts and plenums shall be sealed with approved mastic at joints to provide for an air tight system. Furnace equipment may be sealed with metallic duct tape.

IECC 403

Amend IECC Section 403.2.1 by the addition of an additional paragraph; by the addition of an additional exception to read as follows.

403.2.1 Second paragraph: A minimum R-8 duct insulation shall be installed on all duct work located in unconditioned spaces.

403.2.1 Exception #2 In existing construction where the floor and attic trusses and associated clearances make it impractical to install R-8 insulation on the main trunk of the system R-6 duct may be used.

PART VIII: PRIVATE ROAD STANDARDS IBC Chapter 33

Amend IBC Chapter 33 by adding a new section 3301.3 to read as follows (Reference Chapter 5 in the 2006 International Fire Code):

IBC 3301.3: For new land divisions resulting in one or more buildable parcels of land and where the access easement or right-of-way exceeds one-hundred fifty (150) feet in length from the nearest Public Street, or accepted Private Road or Street, an all-weather road at least twenty (20) feet in unobstructed width and providing a minimum vertical clearance of 13'6" must be constructed to provide access to the one or more new parcels. The road must be constructed prior to initiation of construction or installation of any buildings or other structures, or the introduction of any combustible materials, to the property.

For parcels where the topography or physical obstruction prevents road standards from being met and prevents access by fire equipment all structures shall be provided with an automatic Fire sprinkler system.

An all-weather road is defined as a road capable of carrying a minimum forty-two thousand (42,000) pound vehicle, or greater, as required by the Tusayan Fire Department.

Bridges on private easements or on driveways exceeding one-hundred fifty (150) feet in length must be engineered to carry a forty-two thousand (42,000) pound load. Bridges on Public rights-of-ways or accepted private streets or roads shall be constructed and maintained in accordance with AASHTO HB-170